

New species of neogastropods from the islands of the Gulf of Guinea, West Africa

Nuevas especies de neogasterópodos de las islas del golfo de Guinea, África occidental

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Recibido el 26-V-2011. Aceptado el 28-X-2011

ABSTRACT

Material collected from a recent expedition by the second author (SG) to Principe Island in the Guinean Gulf is studied. Material from nearby islands that was waiting for publication is also included. The new species proposed here belong to the genera *Anachis* (1 species) and *Mitrella* (1 species) in the family Columbellidae, and *Mitromorpha* (3 species) in the family Mitromorphidae, superfamily Conoidea.

RESUMEN

Se estudia el material recogido en una reciente expedición del segundo autor (SG) a la isla de Príncipe en el Golfo de Guinea. Al tiempo se incorpora material de otras islas próximas que estaba pendiente de publicación. Los géneros estudiados en los que se incluyen las nuevas especies encontradas han sido *Anachis* (una especie) y *Mitrella* (una especie) de la familia Columbellidae, y *Mitromorpha* (tres especies) de la familia Mitromorphidae, superfamilia Conoidea.

INTRODUCTION

In recent years the second author (SG) made several trips to the islands of the Guinean Gulf, during which a number of samples were collected. When these were examined, a few new species were found. In the present paper we describe the ones belonging to the families Columbellidae Swainson, 1840 (genera *Anachis* and *Mitrella*) and Mitromorphidae Casey, 1904 (genus *Mitromorpha*) after the recent systematic changes in BOUCHET, KANTOR, SYSOEV & PULLANDRE (2011). On the other hand, material collected on a previous trip by the first author (ER), was mentioned in a previ-

ous paper (ROLÁN & BOYER, 2001), but has now been examined again and compared with the new material collected, enabling us to reach new conclusions regarding its status, which leads us to describe here a further two new species.

Abbreviations used:

MHNS Museo de Historia Natural de la Universidad, Santiago de Compostela
MNCN Museo Nacional de Ciencias Naturales, Madrid, Spain
MNHN Muséum National d'Histoire Naturelle, Paris, France

* Museo de Historia Natural, Universidad de Santiago, Campus Universitario Sur, 15782 Santiago de Compostela, Spain

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MCZ Museum of Comparative Zoology,
Cambridge, USA
NHMUK Natural History Museum,
London, England
CFS collection of Francisco Sicilia
Guillén, Arrecife, Spain

CMS collection of Manuel Suárez,
Ferrol, Spain
CPR collection of Peter Ryall, Maria
Rain, Austria
CSG collection of Sandro Gori, Livorno,
Italia

SYSTEMATIC PART

Family COLUMBELLIDAE Swaison, 1840

Genus *Anachis* H. & A. Adams, 1853

H. & A. ADAMS (1858) defined the genus *Anachis* in the following terms: "Shell ovately-fusiform; spire elevate, whorls longitudinally ribbed; aperture narrow; columella straight; outer lip somewhat rectilinear, crenate internally". Thirteen species are known in the Eastern Atlantic region (including the Macaronesian Archipelagos, the Mediterranean and the West African coast).

Some species of this genus in West Africa were described long ago, the first being *Anachis cuspidata* Marrat, 1877. Not many more species were found over the years and by the end of the XXth century, only five more had been described, the latest being *Anachis avaroides* Nordsieck, 1975. All of these species were described singly and they have mostly a limited geographical range. As the result of the frequent col-

lecting trips made by many malacologists to several countries in the area, it is curious to point out that in the revisions and other papers published over the last 10 years (ROLÁN & LUQUE, 2002; HERNÁNDEZ & BOYER, 2005; PELORCE & BOYER, 2005; ROLÁN, 2005; ROLÁN & BOYER, 2006; PELORCE & ROLÁN, 2007; ROLÁN & DE OLIVEIRA, 2008; HORRO & ROLÁN, 2010; SEGERS, SWINNEN & DE PRINS, 2009), seven new species were described or studied: Only in one case (PELORCE & BOYER, 2005), however, are we to find two species together in this genus, the others having been described always individually.

Since most species have a paucispiral protoconch, presumably their geographical range is small. Only *Anachis avaroides* seems to have a larger distribution area in the Macaronesian archipelagos.

Anachis xani spec. nov. (Figs. 1-6)

Type material: Holotype (Figs. 1-3) in MNHN (24819); Paratypes in the following collections: MNCN (15.05/60002, 1 s, Fig. 4); MHNS (100561, 2 s); NHMUK (1); CPR (1); CSG (9).

Other material examined: 10 shells eroded or without protoconch, and 17 fragments from the type locality.

Type locality: Tinhosa Pequena, 01°22.52'N, 07°16.53'E, under rocks, 25 m, Principe Island.

Etymology: The species is named after Juan Manuel "Xan" Guerra, who is in charge of the shell collections of the Museo de Historia Natural "Luis Iglesias", University of Santiago de Compostela.

Description: Shell (Figs. 1-4) solid, broadly fusiform with a moderate high spire. Protoconch (Fig. 5) with 1 ½ whorls, sharply pointed and about 0.5 mm in maximum diameter, apparently

smooth but with spiral micro striae (Fig. 6) and usually coloured with brown and whitish bands. Teleoconch of 4 ½ slightly convex whorls, with a distinct suture and a very small subsutural



Figures 1-5. *Anachis xani* spec. nov. 1-3: holotype, 5.0 mm (MNHN); 4: paratype, 5.5 mm (MNCN); 5: apex and protoconch of the holotype; 6: detail of the micro sculpture.
Figuras 1-5. *Anachis xani* spec. nov. 1-3: holotipo, 5,0 mm (MNHN); 4: paratipo, 5,5 mm (MNCN); 5: ápice y protoconcha del holotipo; 6: detalle de la microescultura.

shelf. Sculpture formed by axial ribs, badly defined subsuturally, a little irregular, with variable interspaces, about 20 in the two first whorls; in the last whorl, about 15-19 can be observed, but on the last quarter of the whorls, they are almost entirely faded. There are no clear spiral threads, but under high magnification numerous micro striae can be seen: about 10 on first whorl, 13-15 on the second and about 24-28 on the third. Towards the base about 12-13 well marked striae form evident cords. Aperture narrow and axially elongate, usually with 6 teeth on the inner part of the external lip, the upper ones being larger. Columella curved, S-shaped, with 2 denticles usually almost unnoticeable. Shell colour brownish with a pattern of numerous ocellae which are a little larger below the suture, mainly on the last quarter of the shell.

Soft parts, operculum and radula unknown.

Dimensions: The holotype is 5.0 mm; the largest paratype reaches 6.0 mm.

Distribution: Only known from Principe Island.

Remarks: The differences with previously known species are as follows:

Anachis cuspidata (Marrat, 1877) has a larger (about 7-8 mm) shell, the colouration is very variable, the ocellated pattern very uncommon. Known from Senegal.

Anachis avaroides Nordsieck, 1975 has a larger and wider shell, variable in colouration but usually lacking an ocellated pattern; the axial ribs are not

numerous, and it lacks spiral sculpture. It is known from the Azores, Madeira, Selvagem Islands and Canaries.

Anachis valledori Rolán & Luque, 2002 has a smaller and narrower shell, narrow and elongate axial ribs, variable but not ocellated colouration. Endemic to Cape Verde Islands.

Anachis ryalli Rolán, 2005 has a larger and narrower shell, of uniform tan color, the protoconch is more elevated, spiral threads only noticeable in the intervals. Collected in Ghana.

Anachis delamarrei Rolán & Boyer, 2006 has a smaller shell, protoconch with more whorls, fewer axial ribs and it lacks spiral sculpture. Colour uniformly dark brown. Known from Gabon.

Anachis delineata Rolán & de Oliveira, 2008 has a larger shell, with few axial ribs; the colouration comprises bands with an ocellated pattern alternating with others with white blotches. Known from the Cape Verde Islands.

Anachis juani Horro & Rolán, 2010 has a shell with strong axial sculpture but fewer ribs; the spiral cords are strong, about 20 on the last whorl; it lacks an ocellated pattern and has a light band on the last whorl. It is from Angola.

Mitrella annobonensis Rolán, 2005 is rather similar, having less axial sculpture, less white spots, $\frac{1}{4}$ shorter protoconch with different microsculpture (see ROLÁN, 2005: fig. 138-139). Perhaps this species, due to its axial ribs, could be placed in *Anachis* better than in *Mitrella*.

Genus *Mitrella* Risso, 1826

Remarks: In the same previously mentioned works in which *Anachis* species were described, species of the genus *Mitrella* also appeared. This genus includes a larger number of species, and about 30 are presently known for the area that includes Mediterranean, Macaronesian and West African shores. In this genus, there are species with large distribution ranges, such as *Mitrella ocel-*

lata (Gmelin, 1791) which reaches the West Atlantic coast, or *Mitrella melvilli* Kudsén, 1956 from the West African coast, which have a multispiral protoconch. Most of the species, however, like *Mitrella broderipi* (Sowerby, 1844) from the Mediterranean and the Macaronesian archipelagos, have a short paucispiral protoconch and several of these are endemic to small areas.

Mitrella siciliai spec. nov. (Figs. 7-9)

Type material: Holotype (Fig. 7) in MNHN (24820). Paratypes in the following collections: MNCN (15.05/60003, 1 s, Fig. 8), MHNS (100562, 1 s), NHMUK (1 s), CFS (1); CPR (1); CSG (3 s, Fig. 9).

Type locality: Tinhosa Pequena, 01° 20.33' N, 07° 17.35' E, under rocks, 25 m, Principe Island.

Etymology: Named after Francisco Sicilia Guillén, from Arrecife, Lanzarote, mollusc expert, friend and companion of many diving trips.

Description: Shell (Figs. 7-9) solid, broadly fusiform with a moderately high spire. Protoconch with about 1 1/2 whorls, sharply pointed and about 0.65 mm in maximum diameter, apparently smooth, usually coloured with cream and a brown line within. Teleoconch of between 5 - 5 1/2 slightly convex whorls, with distinct suture and a very small subsutural shelf. There is no any axial or spiral sculpture, only growth lines. Towards the base about 10 well marked striae form evident cords, the upper ones being wider. Aperture narrow and axially elongate, usually 6 teeth on the inner part of external lip, the upper one being larger, with a larger space before the following two, which are closed. Columella curved, S-shaped, with about 3 very small denticles, usually almost unnoticeable. Shell colour brownish with a pattern of numerous white ocellae, very variable and more or less apparent from one shell to another, and smaller white blotches which are a little larger below the suture. In the middle of the last whorl there is a dark irregular band interrupted by white circles and below it, these circles are smaller and more numerous.

Dimensions: Holotype is 8.3 mm. The paratypes are similar in size.

Distribution: Only known from Principe Island

Remarks: This species is slightly similar to the following:

Mitrella psilla (Duclos, 1846) is a smaller species present on the continental coast of West Africa, the teleoconch has one whorl less, the colour is lighter and more uniform, and the aperture has 4-5 denticles on the inner part of the external lip.

Besides other morphological differences, *Mitrella melvilli* Knudsen, 1956 and *M. africana* Rolán, 2005, both have a planktotrophic multispiral protoconch.

Mitrella inesitae Rolán, 2005 is larger, more elongate, the second tooth on the inner part of the external lip is larger, the base is not concave, the colour is lighter and the pattern different with a light band in the middle of the last whorl and brown blotches on the suture.

Mitrella aemulata Rolán, 2005 and *M. saotomensis* Rolán, 2005 have smaller and more fragile shells, lighter in colour, wider protoconch, and the small tubercles on the columella more evident.

Mitrella annobonensis Rolán, 2005 is smaller in size with a lighter colour, relatively wider shell, with spiral striae and 5 teeth on the inner part of the external lip.

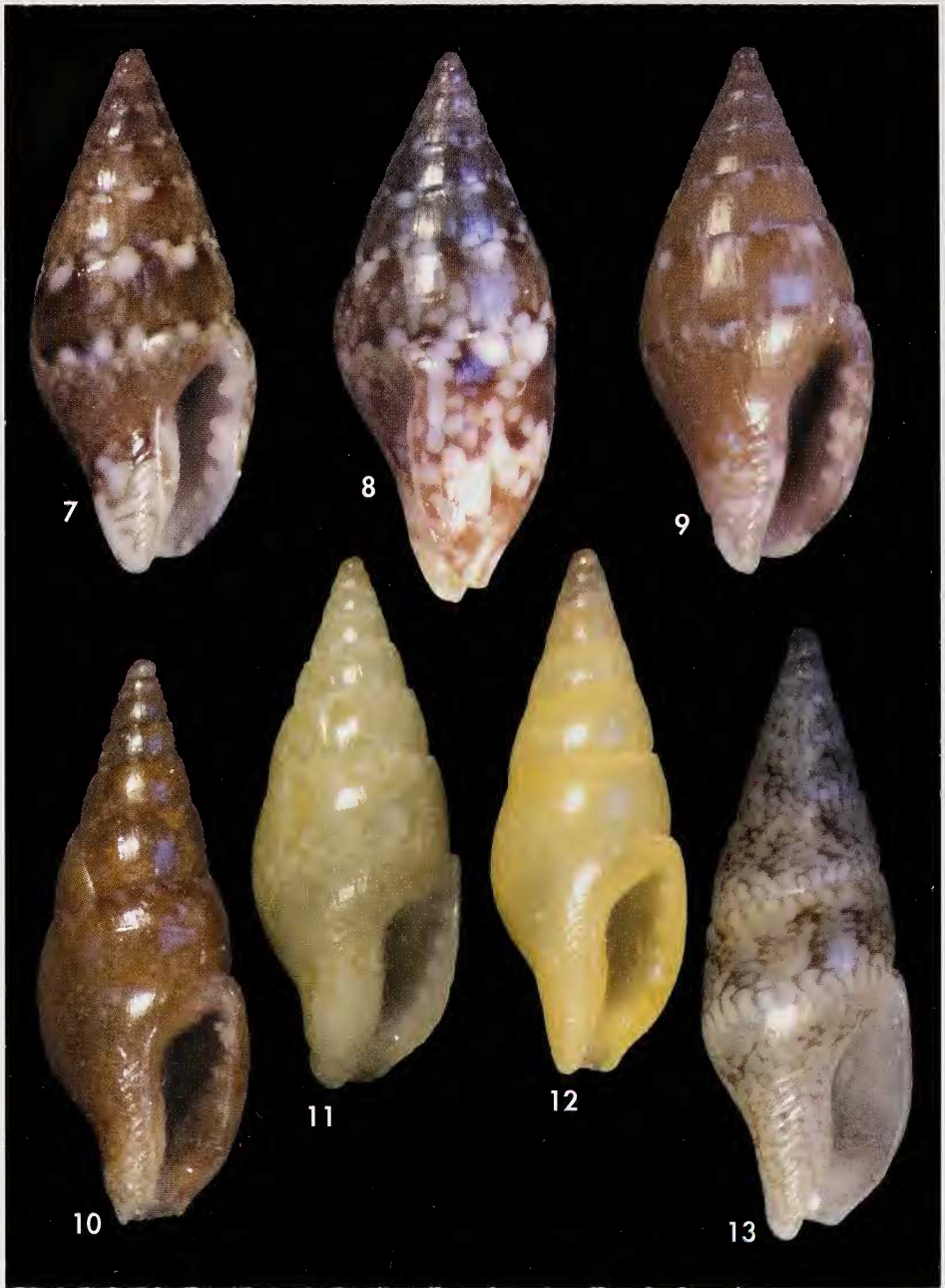
Mitrella noel Rolán & Gori, 2009 has larger shells (up to 9 mm) being also slender, more evident small tubercles on the columella, protoconch lighter, colour of the shell lighter presenting a different pattern with a brown irregular area on the upper part of the whorls.

Other *Mitrella* shells (Figs. 10-13)

In the material collected some other shells with different patterns appeared. The shells of the species of this genus are sometimes very similar at specific level, with an analogous colour and pattern. Others however may have a different pattern and variable colour. For this reason, when the collected sample consists

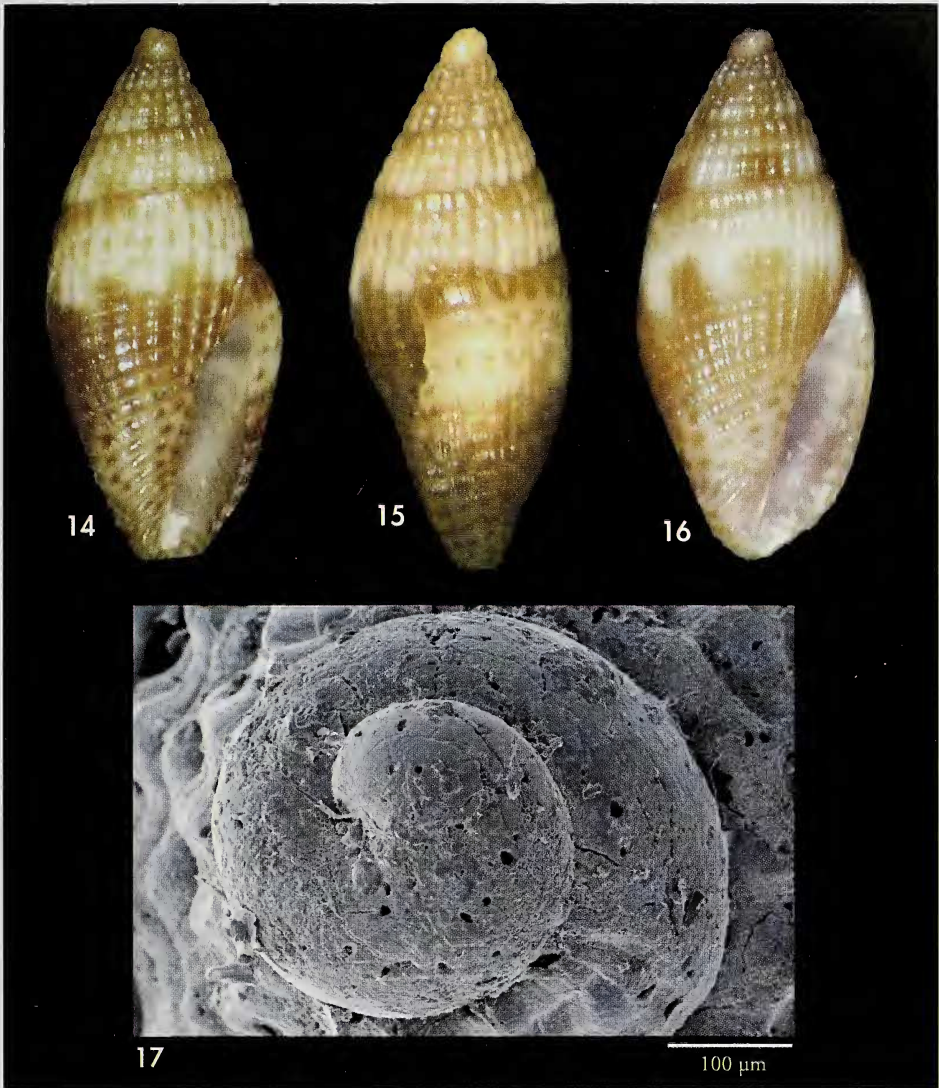
of just a few specimens, only very clear differences can assure us that they are different, whereas small differences may only hint at specific separation, without allowing us to decide whether we are dealing with one or two separate species.

Mitrella cf. *tenebrosa* Rolán, 2005 (Fig. 10); collected in Minerio, in tangle nets,



Figures 7-9. *Mitrella siciliai* spec. nov. 7: holotype, 8.3 mm (MNHN); 8: paratype, 8.8 mm (MNCN); 9: paratype, 8.3 mm (CSG). Figures 10-13. Other *Mitrella*. 10: *Mitrella* cf. *tenebrosa* Rolán, 2005, 8.9 mm (CSG); 11, 12: *Mitrella* sp., 8.3, 8.2 mm (CSG); 13: *Mitrella* cf. *noel* Rolán & Gori, 2009, 9.4 mm (CSG).

Figuras 7-9. *Mitrella siciliai* spec. nov. 7: holotipo, 8,3 mm (MNHN); 8: paratipo, 8,8 mm (MNCN); 9: paratipo, 8,3 mm (CSG). Figuras 10-13. Otras *Mitrella*. 10: *Mitrella* cf. *tenebrosa* Rolán, 2005, 8,9 mm (CSG); 11, 12: *Mitrella* sp., 8,3, 8,2 mm (CSG); 13: *Mitrella* cf. *noel* Rolán & Gori, 2009, 9,4 mm (CSG).



Figures 14-17. *Mitromorpha hernandezii* spec. nov. A: 14, 15: holotype, 4.5 mm (MNCN); 16: paratype, 4.4 mm (MNHN); 17: protoconch.

Figuras 14-17. *Mitromorpha hernandezii* spec. nov. A: 14, 15: holotipo, 4,5 mm (MNCN); 16: paratipo, 4,4 mm (MNHN); 17: protoconcha.

48 m, São Tome, which is very similar to the holotype.

Mitrella sp. (Figs. 11, 12). Two light coloured shells, one of them with some ocellae similar to the previous shell. They were collected in Lagoa Azul, 00° 24' 49" N, 06° 36' 43" E, at 24 m, São Tomé. They could be the same species as

the latter, but we do not really know the full variability of this species.

Mitrella cf. *noel* Rolán & Gori, 2009. These shells (Fig. 13), from Lagoa Azul, 00° 24' 49" N, 06° 36' 43" E, at 24 m, São Tome, have a certain similarity to *M. noel*, with a more minute pattern, but the variability of this species is not well known.

Family MITROMORPHIDAE Casey, 1904

Genus *Mitromorpha* Carpenter, 1865

The species placed in this genus were previously included in *Mitrolumna* Bucquoy, Dautzenberg & Dollfus, 1883. More recently, MIFSUD (2001) made a revision of the species of the Mediterranean and the Macaronesian archipelagos, employing for them the genus *Mitromorpha*. CLEMAM also keeps this genus as valid for these species.

West African species had been mentioned in the literature in scarce numbers. Only four species were known in the last century: *M. monodi* (Knudsen,

1956) from Senegal and *M. crenipicta* (Dautzenberg, 1889), *M. smithi* Dautzenberg & Fischer, 1896 from Azores. More recently, a fourth species from deep water was described by BOUCHET & WARÉN (1980). In the last ten years MIFSUD (2001) described several species from the Mediterranean and the Macaronesian archipelagos. ROLÁN & BOYER (2001) described two new species, one from Senegal and another from São Tome and presented also some morphs considered as variations.

Mitromorpha hernandezi spec. nov. (Figs. 14-17)

Type material: Holotype (Figs. 14-15) in MNCN (15.05/60004). Paratypes in the following collections: MNHN (24821, 1 s, Fig. 16); NHMUK (1 s); MHNS (100563, 7 s); MCZ (1 s), CPR (1 s); CSG (2 s).

Other material examined: 10 s (in bad condition), 1 j, 21 f (MHNS), from type locality; 7 s, and f, from San Antonio de Palé, 2-8 m.

Type locality: Isla Tortuga, Annobón Island, 12 m.

Etymology: The specific name is after José María Hernández, malacologist of Gran Canaria, recently passed away, a frequent companion of the authors on trips and dives.

Description: Shell (Figs. 14-16) small, solid, fusiform, almost biconical. Protoconch (Fig. 17) smooth and shiny, chestnut colored, with a nucleus of about 120 µm and a diameter of about 450 µm. Teleoconch usually with 4-4 1/2 whorls bearing a coarse sculpture of axial ribs, numbering 12-15 on the first whorl, 18-22 on the second and about 28 - 35 on the last one. These ribs are crossed by three spiral cords on the first whorls and 18-20 on the last. The crossing of ribs and cords gives the shell a reticulated aspect. Aperture elongate axially, columella opisthocline, with 2-3 small denticles; on the inner part of the external lip, there are about 10-12 small teeth, some of them more prominent. Colour brown and white: brown on the subsutural area and in the lower part of the last whorl below the periphery. A band just on the separation of these two parts is formed by blotches of brown and white. Towards the base, the brown colour is reduced to

small rectangles on the spiral cords. In some shells a similar line can also be seen on the upper part of the shell.

Dimensions: Holotype is 4.5 mm; specimens may perhaps grow to be a little larger, but most of them are smaller, even between 3.3-4.0 mm

Distribution: Only known from Annobón, from where it is supposed to be endemic.

Remarks: In ROLÁN & BOYER (2001: figs. 28-29, 42, 45) the present species was figured as a morph of *M. saotomensis*. At the time, not enough material had been examined. Today, after having the opportunity to study more shells, we can point out the constancy of morphological differences with *M. saotomensis*. This and the isolation of both populations on two islands many kilometers apart, convinced us that *M. hernandezi* is a valid different species.

Mitromorpha saotomensis has a shell which is larger in size, darker, almost

black, very dense sculpture of axial ribs and spiral cords.

Mitromorpha monodi (Knudsen, 1956) is larger, whitish on the upper part, the protoconch is white, and it is endemic to Senegal.

Mitromorpha annobonensis spec. nov. (Figs. 18-23)

Type material: Holotype (Figs. 18-19) in MNCN (15.05/60005). Paratypes in the following collections: MNHN (24822, 1 s, Fig. 20); NHMUK (1 s); MHNS (100564, 7 s, Fig. 21); CPR (1 s); CSG (1 s).

Other material examined: 10 s (in eroded conditions) and 5 f, from the type locality.

Type locality: San Antonio de Palé, Annobon Island, 5-8 m.

Etiology: The specific name refers to the island where it was collected.

Description: Shell (Figs. 18-21) small, solid, fusiform, almost biconical. Protoconch (Figs. 22-23) smooth and shiny, pink coloured, with a nucleus of about 150 µm and a diameter of about 410 µm. There is a kind of blunt angle on the subsutural part. Teleoconch usually with prominent nodulous spiral cords crossed by axial ribs forming nodules at the intersection points. There are three of these spiral cords on the first whorls and on the last whorl, below the end of the spire, there are 9-13 additional cords, with slightly smaller nodules. There are 13-16 axial ribs on the first whorl, and 14-20 on the subsequent ones. Aperture narrow and elongate, columella opisthocline, almost straight and with very small teeth in the middle. On the inner part of the external lip there are 7-9 small teeth, of which the second on the upper part is larger and more prominent. Colour pink with lighter nodules on the upper part of the last whorl and darker on band which continues the suture, and in some points more. Towards the base, the colour is lighter.

Dimensions: Holotype is 4.3 mm, like most of the paratypes.

Mitromorpha wilheminae Aartsen, Menkhorst and Gittenberger, 1984 is larger and wider, with a similar colour, but the axial sculpture is faded; moreover, it is endemic to the Mediterranean.

Distribution: Only known from Annobón, from where it is supposed to be endemic.

Remarks: *Mitromorpha annobonensis* spec. nov. was figured in ROLÁN & BOYER (2001: figs. 26-27, 41 and 43) as a form of *M. saotomensis* Rolán & Boyer, 2001. At present, after a careful comparison, we can state that they are different species. It must be distinguished from the closest species by the spiral angle of the protoconch which was not found in any other species. Other morphological differences are:

M. saotomensis is darker, almost black; the number of spiral cords on the whorls is higher (21 to 30 on the last one). Also the axial ribs are denser; the protoconch is rounded, lacking any angle and presenting micro tubercles.

M. monodi (Knudsen, 1956) is larger and the upper middle part of the shell and the protoconch are whitish.

M. hernandezii spec. nov. lives in sympatry and is smaller, more densely sculptured in axial ribs and spiral cords, the upper part of the last whorls is lighter with separation from the lowest dark one.

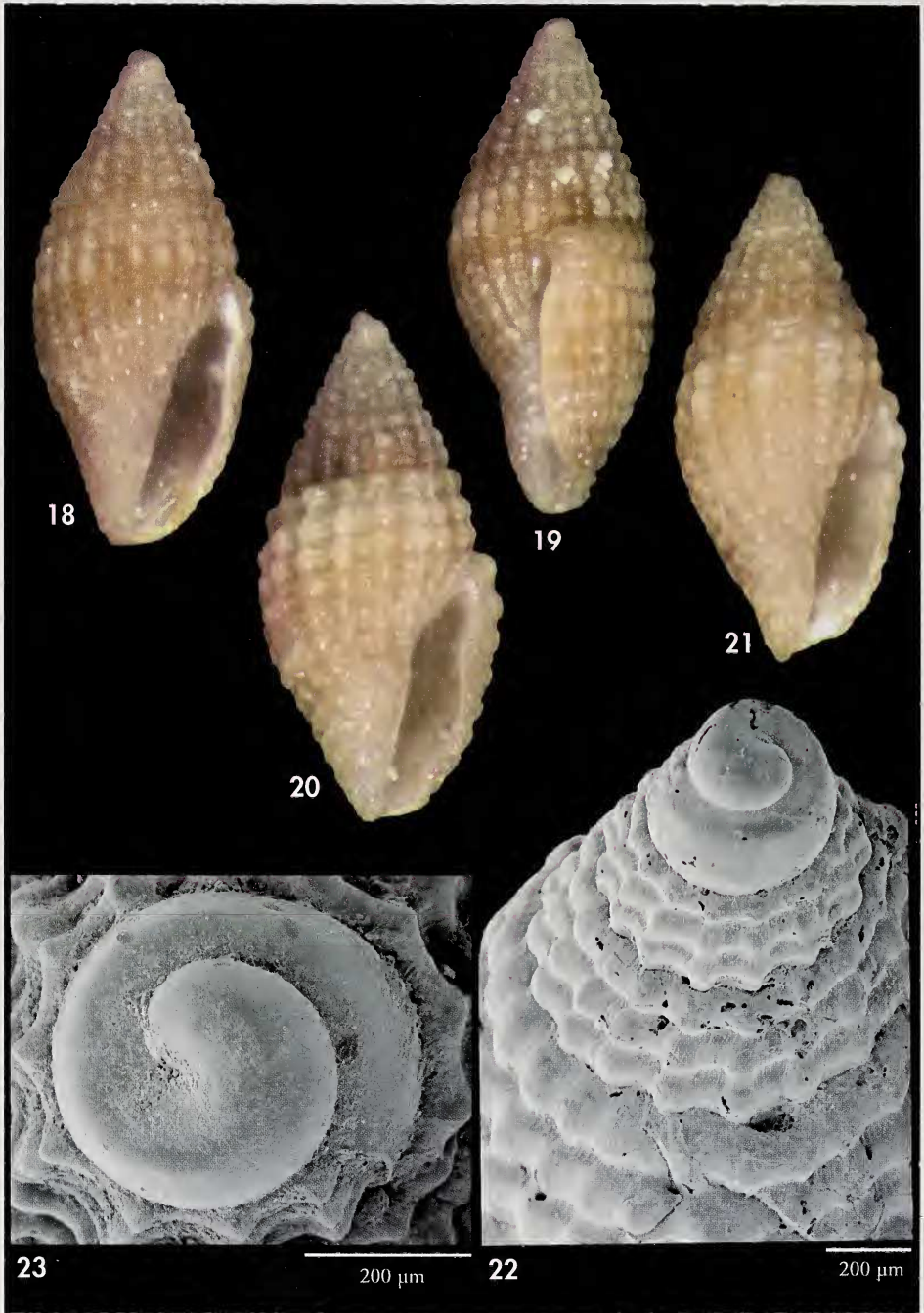
Mitromorpha suarezi spec. nov. (Figs. 24-25)

Type material: Holotype (Figs. 24) in MNHN (24823). Paratypes in the following collections: MNCN (15.05/60006, 1 s, Fig. 24); NHMUK (1 s); MHNS (100565, 1 s); CMS (1 s), CPR (1 s), CSG (4 s).

Other material examined: 24 s eroded and f, from the type locality.

Type locality: Tinhosa Pequena, 01° 20.33' N, 07° 17.35' E, under rocks, 25 m, Príncipe Island.

Etiology: The specific name is after Manuel Suarez Bustabad, enthusiastic malacologist from Ferrol (A Coruña), Spain.



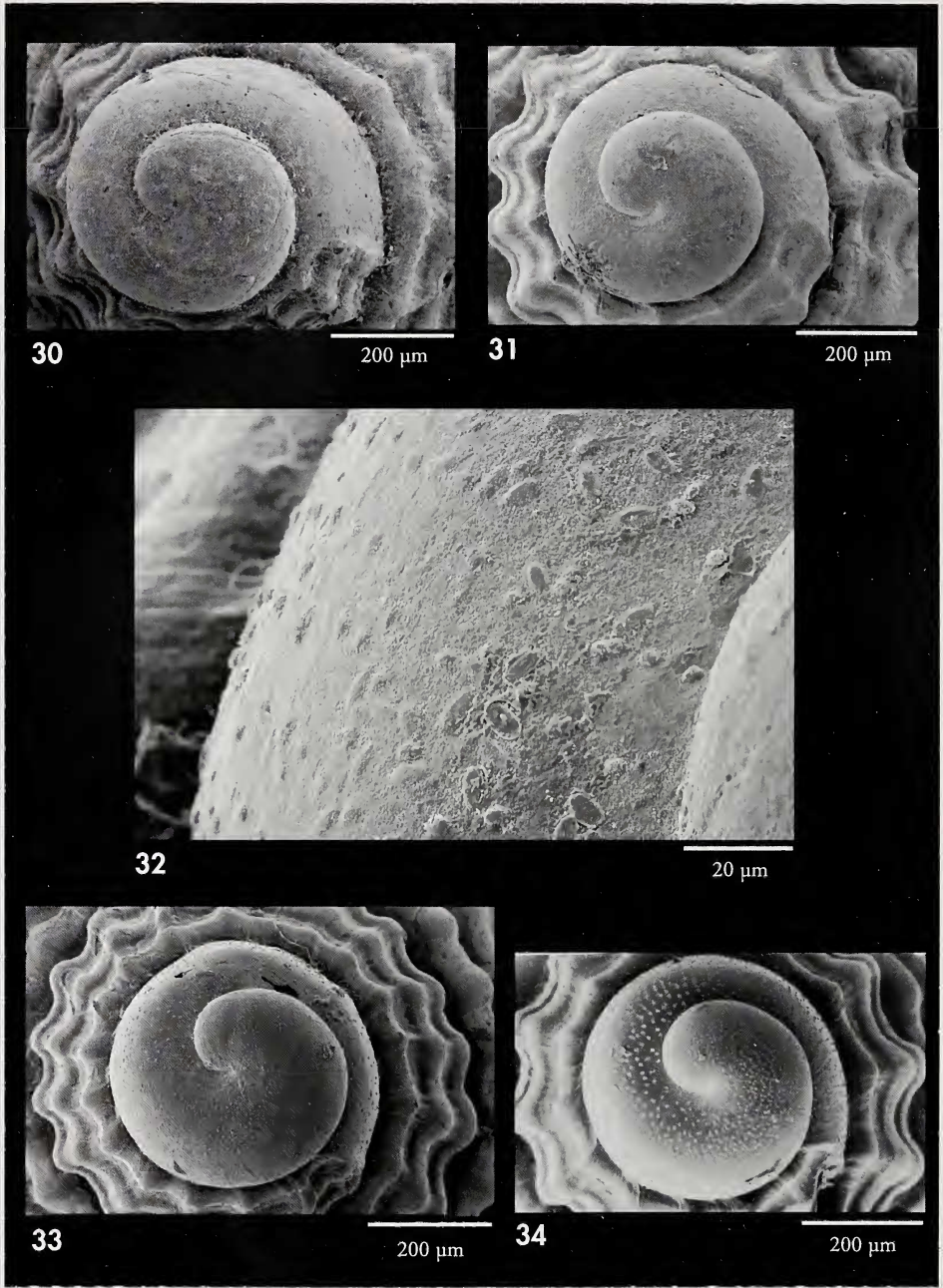
Figures 18-22. *Mitromorpha annobonensis* spec. nov. 18, 19: holotype, 4.3 mm (MNCN); 20: paratype, 4.3 mm (MNHN); 21: paratype, 4.0 mm (MNHN); 22: apex with protoconch; 23: detail of the protoconch.

Figuras 18-22. Mitromorpha annobonensis spec. nov. 18, 19: holotipo, 4,3 mm (MNCN); 20: paratipo, 4,3 mm (MNHN); 21: paratipo, 4,0 mm (MNHN); 22: ápice con protoconcha; 23: detalle de la protoconcha.



Figures 24, 25. *Mitromorpha suarezi* spec. nov. 24: holotipo, 4,7 mm (MNHN); 25: paratipo, 4,6 mm (MNCN). Figures 26-29. *Mitromorpha saotomensis* (Rolán & Boyer, 2001); 26: holotipo, 5 mm (MNCN); 27: paratipo, 5,3 mm (MNHN). Both from Esprinha, São Tomé; 28, 29: shells, 4,3 and 4,9 mm, Sete Brazas, Príncipe Island, 01° 39.13' N, 07° 28.13' E, 20 m.

Figuras 24, 25. *Mitromorpha suarezi* spec. nov. 24: holotipo, 4,7 mm (MNHN); 25: paratipo, 4,6 mm (MNCN). Figuras 26-29. *Mitromorpha saotomensis* (Rolán & Boyer, 2001); 26: holotipo, 5 mm (MNCN); 27: paratipo, 5,3 mm (MNHN). Ambas de Esprinha, São Tomé; 28, 29: conchas, 4,3 y 4,9 mm, Sete Brazas, Isla de Príncipe, 01° 39.13' N, 07° 28.13' E, 20 m.



Figures 30-34. Protoconchs of *Mitromorpha*. 30: *Mitromorpha suarezi* spec. nov. 31-34: *Mitromorpha saotomensis* (Rolán & Boyer, 2001). 31: shell from Sete Brazas, Príncipe Is. (CSG); 32: detail of the microsculpture; 33: shell from Príncipe, Tinhosa Pequena; 34: shell from São Tomé, Baía das Agulhas (from ROLÁN & BOYER, 2001).

Figuras 30-34. Protoconchas de *Mitromorpha*. 30: *Mitromorpha suarezi* spec. nov. 31-34: *Mitromorpha saotomensis* (Rolán & Boyer, 2001). 31: concha de Sete Brazas, Isla de Príncipe (CSG); 32: detalle de la microescultura; 33: concha de Príncipe, Tinhosa Pequena; 34: concha de São Tomé, Baía das Agulhas (de ROLÁN & BOYER, 2001).

Description: Shell (Figs. 24-25) small, solid, fusiform, almost biconical. Protoconch (Fig. 30) smooth and shiny, coloured from pink to brown, with a nucleus of about 110 μm and a diameter of about 480 μm . Teleoconch usually with 4-4 $\frac{1}{2}$ whorls bearing a coarse sculpture of axial ribs and spiral cords. There are about 12 ribs on the first whorl, 14-17 on the second and 20-28 on the last one. There are three ribs on the first whorls and on the last, about 14-16 more from the end of the spire. Aperture narrow and elongate axially, columella a little undulating with two small teeth; on the inner part of the external lip, there are about 10 teeth, the second one larger and prominent. The colour is cream on the upper part of the shell, with an isolated brown rectangle on the suture and darker below; towards the base it is light again with small brown rectangles on the spiral cords.

Dimensions: Holotype is 4.7 mm.

Distribution: Only known from the type locality.

Remarks: *Mitromorpha suarezi* spec. nov. has some similarity to *M. hernandezi* spec. nov., in the pattern and colouration but they can obviously be distinguished: *M. hernandezi* has a slightly smaller shell, its colour is lighter with yellowish on the upper part of the whorls; the protoconch is a little narrower.

Mitromorpha saotomensis (Rolán & Boyer, 2001) has a similar shape, a darker shell, being more densely sculptured. It could be considered a variation, but in the same place where *M. suarezi* was collected, there is also a population of the typical *M. saotomensis* (Figs. 28-29) living sympatrically without intergradations. This population is more similar to that of São Tome only being a little smaller. In ROLÁN & BOYER (2001: figs. 33-34) also were represented shells from Principe I. (Baía das Agulhas). In this last species the presence of tubercles on the protoconch was noticed several times (Figs. 31-34). This could not be shown in *M. suarezi* but perhaps the protoconchs studied were a little eroded.

ACKNOWLEDGEMENTS

The authors thank António A. Monteiro of Lisbon, for the correction of the English text. The optical photographs were made in the Departamento de

Xenética, of the University of Vigo; the SEM micrographs were made by Jesús Méndez and Inés Pazos of the CACTI of the University of Vigo.

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